COURSE OUTLINE

(1) GENERAL

SCHOOL	PHILOSOPHY		
ACADEMIC UNIT	PHILOLOGY		
LEVEL OF STUDIES	POSTGRADUATE		
COURSE CODE	**MGLF024**	**SEMESTER**	
COURSE TITLE	**Computational Linguistics**		
INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*		**WEEKLY TEACHING HOURS**	**CREDITS**
In class lectures		3	15
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).			
COURSE TYPE *general background, special background, specialised general knowledge, skills development*	SCIENTIFIC AREA OF SPECIALIZATION / DEVELOPMENT OF PROFICIENCIES		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes (in Greek)		
COURSE WEBSITE (URL)	https://elearn.uoc.gr/		

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

The main course objective is introducing the basic principles of Computational Linguistics, both on a theoretical, as well as a practical level. Specifically, upon completion of the course, students should be able to:

1) Know the basic principles and issues in Computational Linguistics
2) Know the basic concepts and mathematical methods widely used in Computational and Formal

Linguistics such as the basics of Set Theory, Mathematical Logic and Probability Theory
3) Have a basic understanding of programming with Python
4) Implement small-scale natural language processing tasks/projects in Python
5) Pose research questions the relevant literature

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology
Adapting to new situations
Decision-making
Working independently
Team work
Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas
Project planning and management
Respect for difference and multiculturalism
Respect for the natural environment
Showing social, professional and ethical responsibility and sensitivity to gender issues
Criticism and self-criticism
Production of free, creative and inductive thinking
……
Others…
…….

Search for, analysis and synthesis of data and information, with the use of the necessary technology
Working independently
Working in an international environment
Decision-making
Production of free, creative and inductive thinking
Working in an interdisciplinary environment
Team work

(3) SYLLABUS

The course has both a theoretical and a practical part. In the theoretical part, the basic methods, algorithms and techniques used in Computational Linguistics are introduced, while in the practical part, programming using Python is introduced, initially at a general level, i.e. by presenting the basic principles and structures behind the language, and later on more specifically by presenting small computer projects with reference to various levels of linguistic analysis and/or practical applications to which they refer to. The students are then asked to either undertake a critical bibliographic review of relevant issues in Computational Linguistics or attempt an implementation of small scale natural language processing task.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face-to-face in class
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	• Lectures, presentation slides (pdf) • Class notes, announcements & communication via ClassWeb and elearn • Communication via email and elearn

Activity	***Semester workload***
Seminar	39
Preparation for oral	60

	presentation	
	Independent study	146
	Writing of final term paper	130
	Total ***(25 working hours per credit)***	**375**
STUDENT PERFORMANCE EVALUATION *Description of the evaluation procedure* *Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other* *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*	Oral presentation in class (30%) Written term paper (70%)	

(5) ATTACHED BIBLIOGRAPHY

- *Suggested bibliography*

Jurafsky, D. & J. H. Martin. (2020). *Speech and Language Processing: An Introduction to Natural Language Processing, Speech Recognition, and Computational Linguistics.* 2nd edition. Prentice-Hall.

Partee B., A. Ter Meulen & R. E. Wall (3rd edition draft. Available online here: https://web.stanford.edu/~jurafsky/slp3/)

Bird, Steven, Edward Loper and Ewan Klein (2009), *Natural Language Processing with Python*. O'Reilly (available online here: https://www.nltk.org/book/)

Media Inc.Downey, A., 2008. *How to think like a computer scientist: learning with python.* Green Tea Press. (selected material from the book uploaded at eLearn)

Chatzikyriakidis S. *Lecture Slides.* (uploaded at eLearn).